Blunt trauma presenting to ED in cardiac arrest	Alive	Dead
% (*n*) Outcome	3 (24)	97 (823)
Median age years (interquartile range 25th—75th)	44 (30—72)	35 (24—52)
% (*n*) Male	2 (12)	98 (601)
% (*n*) RTA	1 (4)	99 (614)
% (*n*) Fall >2 m	3 (3)	97 (98)
% (*n*) Fall <2 m	75 (9)*	25 (3)
% (*n*) Assault	20 (3)*	80 (12)
% (*n*) Other mechanism	5 (5)	95 (96)
% (*n*) Injury severity score (interquartile range 25th—75th)	9 (9—10)	34 (25—50)
% (*n*) Head (isolated injury) AIS 3+	3 (2)	97 (69)
% (*n*) Thorax (isolated injury) AIS 3+	0 (0)	100 (39)
% (*n*) Abdomen (isolated injury) AIS 3+	20 (1)*	80 (4)
% (*n*) Spinal (isolated injury) AIS 3+	100 (1)*	0 (0)
% (*n*) Limb (isolated injury) AIS 3+	43 (12)*	57 (16)
% (*n*) Intubation	0.5 (3)	99.5 (642)
% (*n*) Chest drain in A&E	0 (0)	100 (276)
% (*n*) Thoracotomy	0 (0)	100 (13)

* Survival rate within this characteristic significantly >3%—(that of whole sample) $p < 0.05$.

Conclusions: Only 3% of those who presented in cardiac arrest survived; consistent with the previous smaller studies. In this univariate analysis survival was predicted by: fall <2 m or assault mechanism, low ISS and isolated moderate to severe limb injuries (Abbreviated Injury Scale Scores 3+) rather than invasive procedures.

doi: 10.1016/j.injury.2006.06.123

Correlation between IL-6 levels and the SIRS score: Can an IL-6 cut-off predict a SIRS state?

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Background: With greater understanding of the host response to trauma, increasing emphasis is being placed upon assessment of the inflammatory status of the patient. Serum inflammatory cytokines, particularly IL-6, have been used as an adjunct to this assessment. A measurement of >500 pg/dL in combination with early surgery has been associated with adverse outcome. Another method of estimating the patient's inflammatory status is the systemic inflammatory response score (SIRS). This uses a combination of simple laboratory and clinical measurements (Leukocyte count, temperature, pulse rate and respiratory rate) to give a score of 0—4, with a score of 2 or more declaring the patient in a 'SIRS state'. No study has previously examined the relationship between IL-6 levels and SIRS scoring.

Methods: In patients with femoral shaft fracture serum IL-6 levels and relevant clinical parameters were recorded prospectively on admission and on days 1, 3, 5 and 7. Clinical course and complications were documented. Non-parametric tests were used to assess relationships between variables and ROC curves were used to examine their predictive values. Significance was assumed at the $p < 0.05$ level.

Results/discussion: Fifty patients (37 male) were included in this study. The mean age was 32.8 years (15—67) and the median new injury severity score (NISS) was 31.5 (9—75). Both the IL-6 and SIRS score recorded on admission correlated strongly with the patients NISS ($p < 0.001$). The presence of a 'SIRS state' on admission, day 1 and day 3 positively correlated with the IL-6 measurement from the same period ($p < 0.001$), stronger correlations were seen closer to admission, with loss of statistical significance on days 5 and 7. ROC curve analysis revealed elevated IL-6 to be significantly diagnostic of a 'SIRS state' ($p < 0.001$) at all times, again however, test efficacy improved with later values excluded. On days 0 and 1, an IL-6 value above 200 pg/dL diagnosed a 'SIRS state' with an 83% sensitivity and a 75% specificity (area under ROC curve 0.83, $p < 0.0001$). A SIRS state on admission was associated with a significantly increased risk of complication (pneumonia, MOF, death)—68% versus 18%, $p < 0.001$. An IL-6 >200 pg/dL on days 0 or 1 was also associated with an increased rate of complication—55% versus 10% ($p < 0.05$).

Conclusion/significance: The IL-6 concentration and SIRS score are useful adjuncts to clinical evaluation of the injured patient. In the early phase they are closely correlated with the NISS and each other. A cut-off value of 200 pg/dL was shown to be significantly diagnostic of a 'SIRS state'. Significant correlations between adverse events and both the IL-6 level and SIRS state are demonstrated.

doi: 10.1016/j.injury.2006.06.124